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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,141	05/24/2001	Benito L. Tanhehco	27131.00	2687

22465 7590 08/19/2003

PITTS AND BRITTIAN P C
P O BOX 51295
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EXAMINER

WINTER, GENTLE E

ART UNIT

PAPER NUMBER

1746

DATE MAILED: 08/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/865,141

Applicant(s)

TANHEHCO, BENITO L.

Examiner

Gentle E. Winter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☒ Claim(s) 12, 13, 16, and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/29/03 has been entered.

Response to Arguments

1. In paper 9, Applicant indicated:

[T]he Examiner has indicated that certain features of Applicant's invention are not recited in the claims. It is respectfully submitted that such feature is in the claims [as] originally presented. For example, Claim 1, as originally presented includes the limitation "said first absorbent having an apparent density which renders the first absorbent positively buoyant relative to the liquid sought to be solidified ." Because the first absorbent is positively buoyant relative to the liquid, the liquid is necessarily more dense than the first absorbent. Similarly, the second absorbent is necessarily more dense than the liquid as it is "negatively buoyant relative to the liquid."

2. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the density of the fluid that is to be absorbed) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

3. In response to applicant's argument suggesting that the first and second absorbents are defined as the first absorbent having an apparent density which renders the first absorbent positively buoyant relative to the liquid sought to be solidified, and the second absorbent

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negatively buoyant relative to the liquid sought to be solidified, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). The recitation of two absorbents of differing densities is identically disclosed in the prior art of record. The selection of a liquid having an intermediate density would thus describe a system as indicated in the portion of the claim relative to densities.

4. Applicant stated:

The Examiner indicated that the recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention from the prior art. The Examiner continued that if the prior art structure is capable of performing the intended use, it meets the claim. It is respectfully submitted that the prior art structure is incapable of performing the intended use of the present invention. Namely the prior art structure cited by the Examiner is incapable of being added to a volume of liquid to convert the liquid to a gel. Claims 1, 18, and 23 have been further amended to clarify this limitation.

5. Applicant continued:

Benson was discussed in the above-referenced telephone interview. Benson discloses a distributor for a gelling agent. The Examiner noted that Benson highlights the problem with gelling agents that they tend not to evenly disperse within the liquid. Accordingly, Benson discloses a mechanical device to assist in evenly distributing the gelling agent into the liquid. However Benson does not disclose a gelling agent having a variant or gradient of densities.

6. The presence of a structural limitation which would require the addition of a first and second substance, having differing densities, that would result in the formation of a "gel" would effectively destroy the anticipatory nature of the rejection made in view of United States Patent No. 5146877 to Jaffee et al. Claims 1 and 18, reciting "when said first mixture of powdered

absorbents and said second mixture of powered absorbents are introduced into the liquid, the liquid is converted into a gel” fail to provide functional language that will impart structure to the absorbents. The claim should indicate that the absorbents are responsible for the liquid gelling. Purely functional statements cannot serve to distinguish claims, which are not process claims, from a reference since it [the functional statements] does not define any structure. See *In re Mason* 114 USPQ 127, *The Lodge & Shipley Company v. Holstein and Kappert G.m.b.H.* 167 USPQ 625

7. Claims 19-22 have not been amended and remain rejected for the reasons of record.

8. With respect to claims 23-25 drawn to a method, the arguments are persuasive in distinguishing over Jaffee. The gelling activity disclosed in the claim, simply is not disclosed in the Jaffee reference. It is presumed that the absorbents either play a role in the gelling, or are responsible for the gelling. Absent this construction the claim is statutorily deficient because a critical component is not disclosed. Because Jaffee discloses absorbents that do not gel (gelling is a chemical reaction), but absorb (a physical phenomenon) the rejection in view of Jaffee as to claims 23-24 is withdrawn.

Claim Objections

9. Claims 12, 13, 16, and 17 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent

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form, or rewrite the claim(s) in independent form. In this case the “said first and second absorbents being combined in a mixture thereof” is inconsistent with “each compartment containing a portion of one or more of said absorbents”. The absorbents were already combined, thus the claim *changes* the scope of the base claim, it does not further *limit* the scope of the claim, as is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-7, 9, 10, 14, 18, and 19 remain rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 5146877 to Jaffee et al.
2. With respect to claims 1, and 18 drawn to a solidifier comprising a mixture of a first and second absorbent, wherein the absorbents have different apparent densities. Jaffee discloses at e.g. column 2, line 60 *et seq.* a blend of particulate material have a variety of bulk densities. It is noted that the rejection in view of Jaffee, with respect to claims 1 and 18 will, will be withdrawn upon a positive recitation, or other showing that the absorbents are the agents responsible for the gelling. As to claim 2, disclosing that the mixture comprises substantially equal parts, by weight, of said first and second absorbents, e.g. column 4, line 60 *et seq.* discloses a 50% by weight paper to 50% clay mix. As to claim 3 and 4 wherein said mixture comprises greater than fifty percent, by weight, the ratio of 75%/25% is disclosed. See e.g. column 4, line 60 *et seq.* It is

noted for the record that “between about eighty percent and about twenty percent, by weight of said first absorbent” is construed to read on 75/25 as disclosed. This is especially so in light of the teachings of the instant specification.

3. As to claims 5-7 and 9, 19, a plurality of different sized clays is disclosed, e.g. see e.g. column 2, line 39 *et seq.* The lower density clay is considered to be the third absorbent. The third solidifier (construed to read “absorbent” not “solidifier”) exhibits an apparent density, which renders said third absorbent positively buoyant relative to the liquid sought to be solidified. The buoyancy is inherent in the diminished apparent density. The paper has a meaningfully larger particle size than the clay, see e.g. column 1, line 53 *et seq.* As was indicated above, claim 19 has not been amended.

4. As to claims 10 and 14 each of said absorbents in Jaffee is in the form of a flowable powder see e.g. column 2, line 49 *et seq.* teaching uniform blend of granules.

5. Claims 1, 3, 5-6, 8, 11, 15, and 19-24 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 5939086 to Levy (Levy).

6. As to claims 1, 21, 23, and 24, Levy discloses a solidifier for the solidification of a volume of liquid comprising a first and second absorbent, having different apparent densities. See e.g. column 2, line 9 *et seq.* Disclosing that preferably, the superabsorbent polymers are hydrophilic acrylamide and acrylate polymers. More preferably, the superabsorbent polymer of the present invention is a combination of a polysaccharide and an organic monomer, oligomer, polymer, copolymer, terpolymer or tetrapolymer.

7. As to claim 22, the relative density of the absorbents inherently enhances the distribution within said liquid.

8. As to claim 3, the mixture comprises greater than fifty percent, by weight, of said second absorbent whereby said second absorbent tends to gravitate toward the bottom of said vessel.

See e.g. column 10, line 4 disclosing that the preferable, weight ratio of superabsorbent polymer to the total amount of the contaminant reducing agent (which is also an absorbent) and any inert diluent ingredients (which includes, for example, methyl cellulose) used in the composition is about 0.1:100 to about 100:0.001. Other ranges are useable in accordance with the invention, and the preferred ranges will vary according to the situation in which the composition is being used.

9. As to claims 5 and 6 Levy discloses a third absorbent wherein said third solidifier exhibits an apparent density which renders said third absorbent positively buoyant relative to the liquid sought to be solidified. Claim 8 of Levy discloses an active ingredient selected from the group consisting of a nutrient for microbial agents selected from the group consisting of micronutrients, macronutrients and mixtures thereof and a film-forming agent having an oil-soluble end and a water-soluble end. A superabsorbent solid organic polymer and optionally at least one material selected from the class comprising of carriers, binders, suspending agents, stabilizing agents, waxes, natural or synthetic polymers, elastomers, and buoyancy-modifying agents.

10. As to claims 11, 15, and 19 and 20 Levy discloses packaging for said mixture, which is dissolvable or disintegrative when disposed in said liquid to be solidified. See e.g. column 10, line 31 *et seq.*

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 8, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Jaffee, as set forth above, and PGPUB-Document-Number: 20020193492 to Wilson (Wilson). As to claims 8 and 21-22 each and every limitation of claims 8 and 21-22 are as set forth above, except that Jaffee fails to explicitly disclose the 50/40/10 ratio and three *different* absorbents. While it is believed that the ratio is well within the grasp of one of ordinary skill in the art, a view apparently not controverted by applicant based on the specification, Wilson is provided for the apparent gaps in Jaffee. Specifically, Wilson provides, in paragraph 39, that the superabsorbent polymers are even more advantageously utilized in absorbent structures that incorporate superabsorbent polymers having a slow absorption rate, either alone or in tandem with superabsorbent polymers having different absorption rates, in multi-compartmentalized or multi-layered structures. The Federal Circuit in *In re Huang* held:

This court and its predecessors have long held, however, that even though applicant's modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within the capabilities of one skilled in the art, unless the claimed ranges "produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (C.C.P.A. 1955); see *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990). *In re Huang* 40 USPQ2d 1685 at 1688

3. As explained above, Wilson teaches that different absorbents with different absorption times may be used. Further, in paragraph 6, Wilson explicitly provides the motivation for making the instant combination. Namely, the transport of liquid by diffusion through a swollen hydrogel is much slower than transport through the interstitial spaces, a sealing effect occurs in the area of fluid entry. This effect is often referred to as "gel blocking." Subsequent amounts of fluid can no longer penetrate into the absorbent core.

4. Claims 12-13, 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 5092858 to Benson and PGPub 20020193492 to Wilson and the patent to Jaffee as discussed above.

5. As to claim 12, each and every feature of claim 12 is disclosed in Levy as set forth above except that the reference apparently fail to explicitly disclose that the solidifier of claim 11 wherein said packaging comprises two or more compartments, each compartment containing a portion of one or more of said absorbents. While the prior art teaching of a plurality of packets is believed to either be a future use or in the alternative anticipated by the presence of a plurality of packets Benson explicitly discloses in FIG. 7, vertical ribs 76 extend from end caps 72, 74 and are joined by horizontal ribs 78 for providing adequate rigid support for the device and support for the dissolvable material 80 which may be, for example, starch paper. The paper may be connected at 82 along the horizontal and vertical extent of ribs 76, 78. See e.g. column 5, line 28. The artisan would have been motivated to make the instant combination for the reasons explicitly set forth in Benson namely to impart a rigidity or structure to the pack to facilitate submersion.

6. As to the solidifier of claim 13 wherein said two or more compartments exhibit different rates of dissolution or disintegration when disposed in said liquid to be solidified, this feature is inherent when the packet is used as indicated in Benson. As the container is filled, the lower packets will dissolve first, and will thereby gel the contents at the bottom portion of the container before the later added contents, which will expose other packets.
7. As to claims 16 and 17, which depend from claim 15, as set forth above each of the compartments includes one or more of the absorbents. The motivation is exactly the same as above. With respect to claim 17, again as set forth above, different rates of dissolution or disintegration when disposed in said liquid to be solidified will inherently occur as the rate of exposure is not simultaneous.
8. Claims 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 5092858 to Benson, as discussed above and PGPub to Wilson discussed above.
9. Benson does not explicitly disclose that different size particles. In paragraph 11 Wilson discloses that EP 0 631 768 A1 describes an absorbent article that uses superabsorbent polymers with different absorption velocities. The differences in absorption velocities between the various conventional superabsorbent polymers used arise from different particle size distributions (type 1: 600-850 microns, type 2: <250 microns) and are correspondingly small. The artisan would have been motivated to make the instant combination for the reason explicitly set forth in Wilson, namely to obtain different absorption velocities in order to avoid "gel blocking".

Election Restriction

10. Applicant is put on notice that the invention, as currently claimed, may properly be subjected to a restriction/election requirement. All claims have been treated in this Official action because searching the various inventions did not present an undue burden. Nonetheless, substantive amendment of the claims, or the addition of new claims, which would require an additional search may result in a restriction/election requirement.

Conclusion

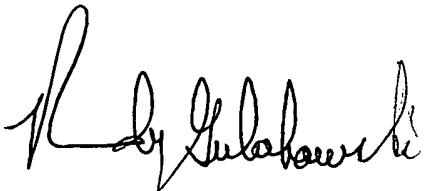
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gentle E. Winter whose telephone number is (703) 305-3403. The examiner can normally be reached on Monday-Friday 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (703) 308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. The direct fax number for this examiner is (703) 746-7746.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Gentle E. Winter
Examiner
Art Unit 1746

August 11, 2003


RANDY GULAKOWSKI
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